

5'	A	TCC	ATG	CTA	AAG	GTA	AAC	AAA	CTG	CAA	CTT	ATA	TCT	GCA	ATT	TAT	TTT	GGT	
	9		18		27		36		45		54								
	63		72		81		90		99		108								
ATA	GAC	AAG	AGG	TAT	GCC	AGT	AGC	ACA	CTG	GTG	GCT	TCA	GAA	ATT	CTC	AAC			
	117		126		135		144		153		162								
ACC	TAG	CTC	GCC	AGA	GAG	TCT	ATG	TAT	GGG	ATT	GAA	CAA	TCT	GTA	AAC	TAA	AGG		
	171		180		189		198		207		216								
ATC	CTA	ATG	AAA	ATA	AGT	ATG	ATA	AAT	TAT	AAG	TCA	CTA	TTG	GCA	CTG	TG			
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	M	K	I	S	M	I	N	Y	K	S	L	L	A	L	L	L			
	225		234		243		252		261		270								
TTT	ATA	TTA	GCC	TCC	TGG	ATC	ATT	TTT	ACA	GTT	TTC	CAG	AAC	TCC	ACA	AAG	GTT		
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	F	I	L	A	S	W	I	I	F	T	V	F	Q	N	S	T	K	V	
	279		288		297		306		315		324								
TGG	TCT	GCT	CTA	AAC	TTA	TCC	ATC	TCC	CTC	CAT	TAC	TGG	AAC	AAC	TCC	ACA	AAG		
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	W	S	A	L	N	L	S	I	S	L	H	Y	W	N	N	S	T	K	

FIGURE 1A

TCC	TTA	TTC	CCT	AAA	ACA	CCA	CTG	ATA	TCA	TTA	AAG	CCA	CTA	ACA	GAG	ACT	GAA
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	L	F	P	K	T	P	L	I	S	L	K	P	L	T	E	T	E
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
333	342	351	360	369	378												
CTC	AGA	ATA	AAG	GAA	ATC	ATA	GAG	AAA	CTA	GAT	CAG	CAG	ATC	CCA	CCC	AGA	CCT
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L	R	I	K	E	I	E	K	L	D	Q	Q	I	P	P	R	P	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
387	396	405	414	423	432												
TTC	ACC	CAC	GTG	AAC	ACC	ACC	AGC	GCC	ACA	CAT	AGC	ACA	GCC	ACC	ATC	ATC	CTC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F	T	H	V	N	T	T	T	S	A	T	H	S	T	A	T	I	L
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
441	450	459	468	477	486												
TTC	ACC	CAC	GTG	AAC	ACC	ACC	AGC	GCC	ACA	CAT	AGC	ACA	GCC	ACC	ATC	ATC	CTC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F	T	H	V	N	T	T	T	S	A	T	H	S	T	A	T	I	L
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
495	504	513	522	531	540												
AAC	CCT	CGA	GAT	ACG	TAC	TGC	AGG	GGA	GAC	CAG	CTG	CAC	ATC	CTG	CTG	GAG	GTG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N	P	R	D	T	Y	C	R	G	D	Q	L	H	I	L	E	V	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
549	558	567	576	585	594												
AGG	GAC	CAC	TTG	GGA	CGC	AGG	AAG	CAA	TAT	GGC	GGG	GAT	TTC	CTG	AGG	GCC	AGG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R	D	H	L	G	R	R	K	Q	Y	G	G	D	F	L	R	A	R

FIGURE 1B

ATG	TCT	TCC	CCA	GCG	CTG	ATG	GCA	GGT	GCT	TCA	GGA	AAG	GTG	ACT	GAC	TTC	AAC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M	S	S	P	A	L	M	A	G	A	S	G	K	V	T	D	F	N
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AAC	GGC	ACC	TAC	CTG	GTC	AGC	TTC	ACT	CTG	TTC	TGG	GAG	GGC	CAG	GTC	TCT	CTG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N	G	T	Y	L	V	S	F	T	L	F	W	E	G	Q	V	S	L
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TCT	CTG	CTC	ATC	CAC	CCC	AGT	GAA	GGG	GTG	TCA	GCT	CTC	TGG	AGT	GCA	AGG	756
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	L	L	I	H	P	S	E	G	V	S	A	L	W	S	A	R	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AAC	CAA	GGC	TAT	GAC	AGG	GTG	ATC	TTC	ACT	GGC	CAG	TTT	GTC	AAT	GGC	ACT	TCC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N	Q	G	Y	D	R	V	I	F	T	G	Q	F	V	N	G	T	S
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
819	828	828	828	828	828	828	828	828	828	828	828	828	828	828	828	828	828
CAA	GTC	CAC	TCT	GAA	TGT	GGC	CTG	ATC	CTA	AAC	ACA	AAT	GCT	GAA	TTG	TGC	CAG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q	V	H	S	E	C	G	L	I	L	N	T	N	A	E	L	C	Q

FIGURE 1C

TAC	CTG	GAC	AAC	AGA	GAC	CAA	GAA	GGC	TTC	TAC	TGT	GTG	ACG	CCT	CAA	CAC	918
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Y	L	D	N	R	D	Q	E	G	F	Y	C	V	R	P	Q	H	M
927	927	936	945	954	963	972											
CCC	TGT	GCT	GCA	CTC	ACT	CAC	ATG	TAT	TCT	AAG	AAC	AAG	AAA	GTT	TCT	TAT	CTT
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P	C	A	A	L	T	H	M	Y	S	K	N	K	K	V	S	Y	L
981	990	999	1008	1017	1026												
AGC	AAA	CAA	GAA	AAG	AGC	CTC	TTT	GAA	AGG	TCA	AAT	GTG	GGT	GTA	GAG	ATT	ATG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	K	Q	E	K	S	L	F	E	R	S	N	V	G	V	E	I	M
1035	1044	1053	1062	1071	1080												
GAA	AAA	TTC	AAT	ACA	ATT	AGT	GTC	TCC	AAA	TGC	AAC	ACA	CTG	AAG	TCA	GTG	GAT
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E	K	F	N	T	I	S	V	S	K	C	N	T	L	K	S	V	D
1089	1098	1107	1116	1125	1134												
CTG	CAT	GAA	TCT	GGA	AAA	TTG	CAA	CAC	CAG	CTT	GCT	GTG	GAT	TTG	GAT	AGG	AAC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L	H	E	S	G	K	L	Q	H	Q	L	A	V	D	L	D	R	N

FIGURE 1D

FIGURE 1E

1413	1422	1431	1440	1449	1458
TAC	AAT	GAT	GCA	GAA	AGA
Y	N	D	A	E	R
1467	1476	1485	1494	1503	1512
ATA	AAG	GAC	ATT	TTC	CAG
I	K	D	I	F	Q
1521	1530	1539	1548	1557	1566
ACA	ATT	GCA	TAT	GGC	ACA
T	I	A	Y	G	T
1575	1584	1593	1602	1611	
CAG	ATT	AAT	ATA	TTA	TAA
Q	I	N	I	L	L

FIGURE 1F

5'	GCC	AGT	TA	GAA	CTC	ACA	GGT	ACT	TTT	CCA	GCC	ACC	CAG	ATA	GGA	GAG	ATC	ATT
	9		18		27										36	45	54	
	63		72		81										90	99		108
	AAA	ACA	GTG	CAT	TCT	GTG	CTA	CCT	GAC	ACC	TAT	TGG	GGT	CCT	GGA	AGG	AGG	AAG
	117		126		135										144	153		162
	CAA	CAA	TCC	TGA	GTG	AAA	CCT	CGA	CAA	GAA	GTA	TCC	AAT	AGG	ACA	TTC	GTC	ATG
	---		---		---										---	---	---	---
																		M
	171		180		189										198			216
	TCC	TCA	AAT	ACA	ATG	CTT	CAA	AAA	ACG	CTG	CTG	ATC	TTG	ATC	TCT	TTT	TCA	GTA
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	S	S	N	T	M	L	Q	K	T	L	L	I	L	I	S	F	S	V
	225		234		243										252		261	
	GTA	ACC	TGG	ATG	ATT	TTT	ATA	ATT	TCT	CAG	AAC	TTC	ACA	AAG	CTT	TGG	TCT	GCT
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	V	T	W	M	I	F	I	I	S	Q	N	F	T	K	L	W	S	A
	279		288		297										306		315	
	CTA	AAC	TAA	TCC	ATC	TCT	GTC	CAT	TAC	TGG	AAC	AAC	TCC	GCA	AAG	TCC	TTA	TTC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	L	N	L	S	I	S	V	H	Y	W	N	N	S	A	K	S	L	F

FIGURE 2A

CCT	AAA	ACA	TCA	CTG	ATA	CCA	TTA	AAG	CCA	CTA	ACA	GAG	ACT	GAA	CTC	AGA	ATA
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
P	K	T	S	L	I	P	L	K	P	L	T	E	T	E	L	R	I
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
K	E	I	I	E	K	L	D	Q	Q	I	P	P	R	P	F	T	H
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
441				450				459			468			477			486
GTG	AAC	ACC	ACC	AGC	AGT	GCC	ACA	CAC	AGC	ACA	GCC	ACC	ATC	CTC	AAC	CCT	CGA
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V	N	T	T	T	S	A	T	H	S	T	A	T	I	L	N	P	R
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
495				504				513			522			531			540
GAT	ACA	TAC	TGC	AGG	GGA	GAC	CAG	CTG	GAC	ATC	CTA	CTG	GAG	GTG	AGG	GAC	CAC
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
D	T	Y	C	R	G	D	Q	L	D	I	L	E	V	R	D	H	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
549				558				567			576			585			594
TTG	GGA	CAG	AGG	AAG	CAA	TAT	GGT	GGG	GAT	TTC	CTG	AGG	GCC	AGG	ATG	TCC	TCC
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
L	G	Q	R	K	Q	Y	G	G	G	D	F	L	R	A	R	M	S

FIGURE 2B

CCA	GCA	CTG	ACG	GCA	GGT	GCT	TCA	GGA	AAG	GTG	ATG	GAC	TTC	AAC	AAT	GGC	ACC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P	A	L	T	A	G	A	S	G	K	V	M	D	F	N	N	G	T
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TAC	CTG	GTC	AGC	TTC	ACT	CTG	TTC	TGG	GAG	GGC	CAG	GTC	TCC	CTG	TCT	CTG	CTG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Y	L	V	S	F	T	L	F	W	E	G	Q	V	S	L	S	L	L
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CTC	ATC	CAC	CCC	AGT	GAA	GGG	GCG	TCG	GCT	CTC	TGG	AGG	GCA	AGG	AAC	CAA	GGC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L	I	H	P	S	E	G	A	S	A	L	W	R	A	R	N	Q	G
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TAT	GAT	AAA	ATT	ATT	TTC	AAA	GGC	AAA	TTT	GTT	AAT	GGC	ACC	TCT	CAT	GTC	TTC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Y	D	K	I	I	F	K	G	K	F	V	N	G	T	S	H	V	F
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ACT	GAA	TGT	GGC	CTG	ACC	CTA	AAC	TCA	AAT	GCT	GAA	CTC	TGT	GAA	TAT	CTG	GAT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
T	E	C	G	L	T	L	N	S	N	A	E	L	C	E	Y	L	D

FIGURE 2C

GAC	AGA	GAC	CAA	GAA	GCC	TTC	TAT	TGT	ATG	AAG	CCT	CAA	CAC	ATG	CCC	TGT	GAG
D	R	D	Q	E	A	F	Y	C	M	K	P	Q	H	M	P	C	E
927		936			945					954					963		972
GCT	CTG	ACC	TAC	ATG	ACC	ACC	CGG	AAT	AGA	GAG	GTA	TCT	TAT	CTT	ACA	GAC	AAG
A	L	T	Y	M	T	T	R	N	R	E	V	S	Y	L	T	D	K
981		990			999					1008					1017		1026
GAA	AAC	AGC	CTT	TTC	CAC	AGG	TCC	AAA	GTG	GGA	GTT	GAA	ATG	ATG	AAG	GAT	CGT
E	N	S	L	F	H	R	S	K	V	G	V	E	M	M	K	D	R
1035		1044			1053					1062					1071		1080
AAA	CAC	ATT	GAT	GTC	ACT	AAT	TGT	AAC	AAG	AGA	GAA	AAA	ATA	GAA	GAG	ACA	TGC
K	H	I	D	V	T	N	C	N	K	R	E	K	I	E	E	T	C
1089		1098			1107					1116					1125		1134
CAA	GTT	GGA	ATG	AAG	CCT	CCT	GTC	CCT	GGT	TAT	ACT	TTA	CAA	GGA	AAA	TGG	
Q	V	G	M	K	P	P	V	P	G	G	Y	T	L	Q	G	K	W

FIGURE 2D

ATA	ACA	ACA	TTT	TGC	AAC	CAG	GTT	CAG	TTA	GAC	ACA	ATT	AAG	ATA	AAT	GGC	TGT	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
I	T	T	F	C	N	Q	V	Q	L	D	T	I	K	I	N	G	C	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1143			1152			1161			1170			1179			1179			1188
TAC	TAC	TTC	CCC	AAA	CTC	ATT	TAC	CTC	CTG	GGA	GAC	TCT	ACA	CTA	CGT	CAG	TGG	ATC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L	K	G	K	L	I	Y	L	L	G	D	S	T	L	R	Q	W	I	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1197			1206			1215			1224			1233			1233			1242
TGG	AAA	GGC	AAA	CTC	ATT	TAC	CTC	CTG	GGA	GAC	TCT	ACA	CTA	CGT	CAG	TGG	ATC	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L	K	G	K	L	I	Y	L	L	G	D	S	T	L	R	Q	W	I	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1251			1260			1269			1278			1287			1287			1296
TAC	TAC	TTC	CCC	AAA	GT	T	GTA	AAA	ACA	CTG	AAG	TTT	TTT	GAT	CTT	CAT	GAA	ACT
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Y	Y	F	P	K	V	V	K	T	L	K	F	F	D	L	H	E	T	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1305			1314			1323			1332			1341			1341			1350
GGA	ATC	TTT	AAG	AAA	CAT	TTC	CTG	GAT	GCA	GAA	AGA	CAC	ACT	CAG	ATT	CAA		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G	I	F	K	K	H	L	L	D	A	E	R	H	T	Q	I	Q		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1359			1368			1377			1386			1395			1395			1404
TGG	AAA	AAA	CAT	AGC	TAT	CCC	TTC	GTC	ACT	TTC	CAG	CTC	TAC	TCT	CTG	ATA	GAT	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W	K	K	H	S	Y	P	F	V	T	F	Q	L	Y	S	L	I	D	

FIGURE 2E

1413	CAT	GAT	TAT	ATC	CCT	CGG	GAA	ATT	GAC	CGG	CTA	TCA	GGT	GAC	AAA	AAC	ACA	GCC
1422	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1431	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1440	1449	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474
1467	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1476	I	V	I	T	F	G	Q	H	F	R	P	F	P	I	D	I	F	I
1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503
1494	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1495	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521
1503	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1512	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530
1512	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1512	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539
1521	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1521	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1548
1530	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1530	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1539	1540	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554	1555	1556	1557
1539	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1539	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1548	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565	1566
1548	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1548	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1557	1558	1559	1560	1561	1562	1563	1564	1565	1566	1567	1568	1569	1570	1571	1572	1573	1574	1575
1557	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1557	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1566	1567	1568	1569	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580	1581	1582	1583	1584
1566	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1566	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1575	1576	1577	1578	1579	1580	1581	1582	1583	1584	1585	1586	1587	1588	1589	1590	1591	1592	1593
1575	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1575	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1593	1594	1595	1596	1597	1598	1599	1600	1601	1602	1603	1604	1605	1606	1607	1608	1609	1610	1611
1593	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1593	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1602	1603	1604	1605	1606	1607	1608	1609	1610	1611	1612	1613	1614	1615	1616	1617	1618	1619	1620
1602	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1602	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1611	1612	1613	1614	1615	1616	1617	1618	1619	1620	1621	1622	1623	1624	1625	1626	1627	1628	1629
1611	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1611	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1620	1621	1622	1623	1624	1625	1626	1627	1628	1629	1630	1631	1632	1633	1634	1635	1636	1637	1638
1620	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1620	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1629	1630	1631	1632	1633	1634	1635	1636	1637	1638	1639	1640	1641	1642	1643	1644	1645	1646	1647
1629	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1629	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1647	1648	1649	1650	1651	1652	1653	1654	1655	1656	1657	1658	1659	1660	1661	1662	1663	1664	1665
1647	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1647	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A
1665	1666	1667	1668	1669	1670	1671	1672	1673	1674	1675	1676	1677	1678	1679	1680	1681	1682	1683
1665	ATC	GTC	ATC	ACC	TTT	GGC	CAG	CAC	TTT	AGA	CCA	TTT	CCC	ATT	GAC	ATT	TTT	ATT
1665	H	D	Y	I	P	R	E	I	D	R	L	S	G	D	K	N	T	A

FIGURE 2F

TTC	AAA	GAC	CTC	AAC	GTC	GGC	ATC	ATT	GAT	GCC	TGG	GAC	ATG	ACC	ATT	GCA	TAT
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F	K	D	L	N	V	G	I	I	D	A	W	D	M	T	I	A	Y
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G	T	D	T	I	H	P	P	D	H	V	I	G	N	Q	I	N	M
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1737	1746	1755	1764	1773	1782												
GGC	ACT	GAC	ACT	ATC	CAC	CCA	CCT	GAT	CAT	GTG	ATT	GGA	AAT	CAG	ATT	AAC	ATG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G	T	D	T	I	H	P	P	D	H	V	I	G	N	Q	I	N	M
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1791	1800	1809	1818	1827	1836												
TTC	TTA	AAC	TAC	ATT	TGC	TAA	GGG	ATA	AAT	ACT	ATA	CAA	AAT	CAC	TAG	GAA	CCA
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F	L	N	Y	I	C												
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1845	1854	1863	1872	1881	1890												
ATC	TCT	GCA	CAT	AAT	CCC	ACA	TGT	ATT	GTA	AAG	TAA	GTT	TTA	CTC	ATT	TTA	GGA
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1899	1908	1917	1926	1935	1944												
ACT	AAG	GAA	AAT	AAA	TTT	AAA	AGA	ATC	TGT	TTG	GGG	AGG	AAG	GCT	ATG	TAA	GGA
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	1962	1971	1980	1989	1998												
CAA	TGA	CAA	CTG	ATA	AGG	GAT	GCA	AAA	CCA	AGA	GAA	TCA	TTC	ATG	AAG	AAT	GAC
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	2016	2025	2034	2043	2052												
TAT	ACC	ATG	CCT	GGT	TCT	GAT	GCT	CGT	TTA	AAA	TAT	TAA	AAA	AGT	TTT	TTA	AAA

FIGURE 2G

2061	2070	2079	2088	2097	2106
GCC ATG TTA TTA AGC TGA TTT GAA AAT ATC TGT ACA AAT TCA TGA TGC TTT CTA					
2115	2124	2133	2142	2151	2160
TTT CCA ATA TAG ATA TTT CCT AGC TCT GTC TAT TGA AAA GGG CTA GGA GCA ATG					
2169	2178	2187	2196	2205	2214
ATA ACC CAT TAG CAA TAA TCA CTC CGA GCA CCC TAA CTG TGA TGT CTA AGA ACC					
2223	2232	2241			
CTT CCT CAA TAA AAG AAA AGA GGC ATC CTT GAA G 3'					

FIGURE 2H

1	M K I S M I N Y K S I L A L L L F I L A S W I I F T V F Q N 3229449
1	M S S N T M L Q K T L L L S F S V V T W W W I F I I S Q N 7484349
1	- - - - - - - - H K - Y L C L L A A I C V L C I I S Q N g1762
30	S T K V W S A L N L S I S L H Y W N N S T K S L F P K T P L 3229449
31	E T K L W S A L N L S I S V H Y W N N S A K S L F P K T S L 7484349
25	S T K I W G A L K L P N S H Y Y S N T S M I S S T P K M S V g1762
60	I S L K P L T E T E L R I K E I I E K L D Q Q I P P R P F T 3229449
61	I P L K P L T E T E L R I K E I I E K L D Q Q I P P R P F T 7484349
55	S P V K S L T E T E L R V K E I L E K L D R I P P R P F T g1762
90	H V N T T T S A T H S T A T I L N P R D T Y C R G D Q L H I 3229449
91	H V N T T T S A T H S T A T I L N P R D T Y C R G D Q L D I 7484349
85	H V N T T T S A T H S T A T I L N P Q D K Y C V G D Q L D I g1762
120	L L E V R D H L G R R K Q Y G G D F L R A R M S S P A L M A 3229449
121	L L E V R D H L G Q R R K Q Y G G D F L R A R M S S P A L T A 7484349
115	L L E V R D Y L G H Q K E Y G G D F L R A R M F S P A L K A g1762
150	G A S G K V T D F N N G T Y L V S F T L F W E G Q V S L S L 3229449
151	G A S G K V M D F N N G T Y L V S F T L F W E G Q V S L S L 7484349
145	G A S G K V T D F N N G T Y L V S F T L F W E G Q V S L S S V g1762

FIGURE 3A

180	L L I H P S E G V S A L W S A R N Q G Y D R V I F T G Q F V	3229449
181	L L I H P S E G A S A L W R A R N Q G Y D K I F K G K F V	7484349
175	L L I H P S E G A S A L W R A R N Q G Y D R I I F K G Q F V	g1762
210	N G T S Q V H S E C G L I L N T N A E L C Q Y L D N R D Q E	3229449
211	N G T S H V F T E C G L T L N S N A E L C E Y L D D R D Q E	7484349
205	N G T S H V F T E C S L T L N S N T E E C K Y L N G R D Q D	g1762
240	G F Y C V R P Q H M P C A A L T H M Y S K N K V S Y L S K	3229449
241	A F Y C M K P Q H M P C E A L T Y M T R N R E V S Y L T D	7484349
235	V F Y C M K P Q H M P C E A L T H V T S R N R D I S Y L T S	g1762
270	Q E K S I L F E R S N V G V E I M E K F N T I S V S K C N -	3229449
271	K E N S I L F H R S K V G V E M M K D R K H I D V T N C N K R	7484349
265	K E K N I L F H R S K V G V E I M K N Q - H I D V S Q C N K S	g1762
298	- -	3229449
301	E K I E E T C Q V G M K P P V P G G Y T L Q G K W I T T F C	7484349
294	K E V K E K C Q I G M K I P V P G G Y T L Q G R W L T T F C	g1762
298	- -	3229449
331	N Q V Q L D T I K I N G C L K G K L I Y L L G D S T L R Q W	7484349
324	N Q I Q L D T A K I S G C L K G K L I Y L M G D S T L R Q W	g1762

FIGURE 3B

298	- - - - -	T L K S V D L H E S G K L Q H Q L A V D L	3229449
361	I Y Y F P K V V K T L K F F D L H E T G F K K H L L D A	7484349	
354	I Y Y L P K V M K T L K F F D L H E T G N F K K H L L D A	g1762	
319	D R N I N I Q W Q K Y C Y P L I G S M T Y S V K E M E Y L T	3229449	
391	E R H T Q Q W K K H S Y P F V T F Q L Y S L I D H D Y I P	7484349	
384	E K H T Q Q W K K H S H P F V T Y Q L F S V I D H G Y I P	g1762	
349	R A I D R T G E K N T V I V I S L G Q H F R P F P I D V F	3229449	
421	R E I D R L S G D K N T A I V I T F G Q H F R P F P I D I F	7484349	
414	Q E I D R L I G D K D T V I V I T F G Q H F R P F P I D I F	g1762	
379	I R R A L N V H K A I Q H L L R S P D T M V I I K T E N I	3229449	
421	I R R A I G V Q K A I E R L F L R S P A T K V I I K T E N I	7484349	
414	I R R A I S V R Q A I E R L F L R S P A T K V I V K T E N I	g1762	
409	R E M Y N D A E R F S D F H G Y I Q Y L I I K D I F Q D L S	3229449	
481	R E M H I E T E R F G D F H G Y I H Y L I M K D I F K D L N	7484349	
474	R E M H I E A E R F G D F H G Y I Q Y L T L K D I F K D L N	g1762	
439	V S I I D A W D T T A Y G T N N V H P P Q H V V G N Q I N	3229449	
511	V G I I D A W D M T T A Y G T D T I H P P D H V I G N Q I N	7484349	
504	V G V V D A W D M T T A Y G T N N V H P P D Q V I G N Q I N	g1762	

FIGURE 3C

FIGURE 3D

469	I	L	L	N	Y	I	C
541	M	F	L	N	Y	I	C
534	M	F	L	N	Y	I	C